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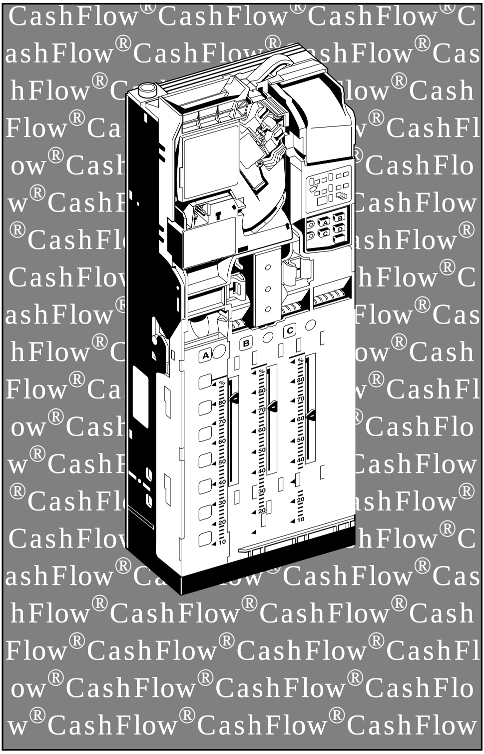
CASHFLOW® 530

REFERENCE SERIES

CHANGEGIVER

POCKET GUIDE

ROUTINE MAINTENANCE, SAFETY, INSTALLATION & TROUBLESHOOTING



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CashFlow® 530 changegiver Pocket Guide

Part Number : **143834044**

This Edition (August 1994)

User Safety Notices

WARNING

Before cleaning, servicing, removing or replacing CashFlow® units, **ALWAYS SWITCH OFF** or **ISOLATE** the **ELECTRICITY SUPPLY** to the host machine.

CAUTION

This guide is for use only by personnel trained to carry out electrical installation.

Maximum Operating Voltage

Do not apply more than the voltage specified on the unit.

Dangerous Environments

Do not operate the unit in the presence of flammable gases or fumes, or after the entry of fluid into the machine.

Disposal of Product

If necessary, always dispose of defective units according to local regulations.

Conformance to International Standards

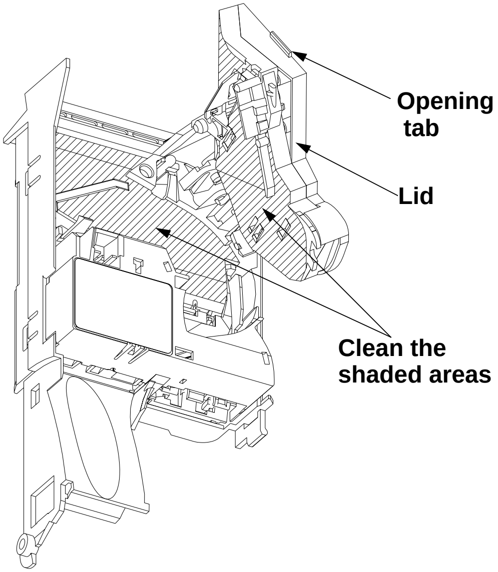
When installed and operated according to the instructions provided for the particular unit, CashFlow® products meet the applicable international and national safety standards for any country in which they are used.

Routine Maintenance

WARNING

Switch off the power to the host machine *before* cleaning the unit

Clean the coin pathway (shown shaded in the figure) regularly with a soft cloth moistened with water. Take care that all the surfaces are dry before you close the lid of the unit, particularly if you have had to clean the unit after the entry of dirt or fluid.



Take care that no drops of water enter the unit during cleaning.

Never use solvents or abrasive creams to clean the unit. These will damage the surfaces. Ensure that the lid is fully closed after cleaning.

NOTE: If you switch the machine on when the lid of the acceptor unit is not fully closed, coins will be rejected*, even if you then close the lid.*

If this happens, **switch off the power to the machine for at least 15 seconds**, then close the lid again. Make sure the lid snaps shut.

Switch the power on. Check that coins are accepted.

Cleaning the Dispenser Arms

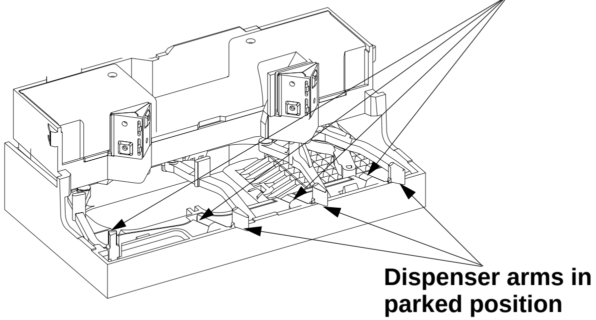
Switch off the power to the host machine *before* cleaning the unit

Squeeze together the two release catches of the coin storage cassette and lift out the cassette.

Clean the dispenser arms and their paths in the dispenser base with a soft cloth moistened with water.

Switch on power to the machine, press the yellow Mode button twice to park the dispenser arms, and replace the coin cassette.

Check that the two release catches snap shut.



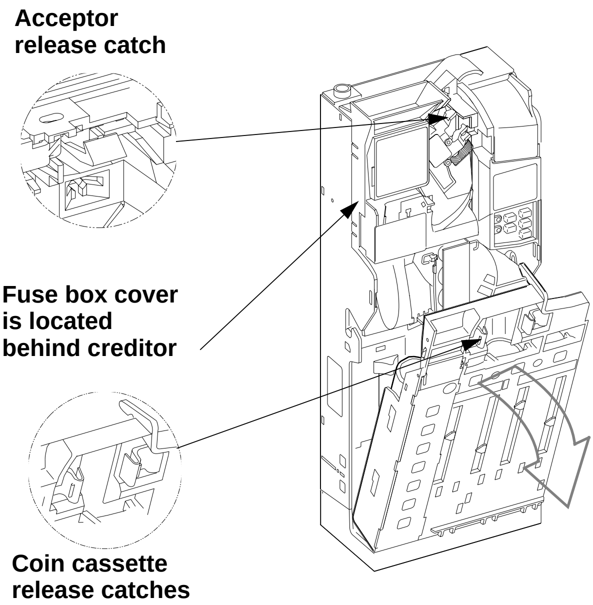
You should only **remove** the dispenser and the dispenser arms for cleaning if there is a heavy build up of dirt or other matter in the dispenser.

Always refer to the ***Product Maintenance Handbook*** before removing these parts.

Checking and Replacing a Fuse

Switch off the power to the host machine *before* checking a fuse

Squeeze together the two release catches of the coin storage cassette and lift out the cassette.



Press down the blue release catch above the creditor with a small screwdriver. Pull the top of the creditor forward and downwards. Unplug the exposed ribbon cable and lift out the creditor.

The fuses are under a cover in the left hand side of the unit.

Always replace a blown fuse with one of the same rating.

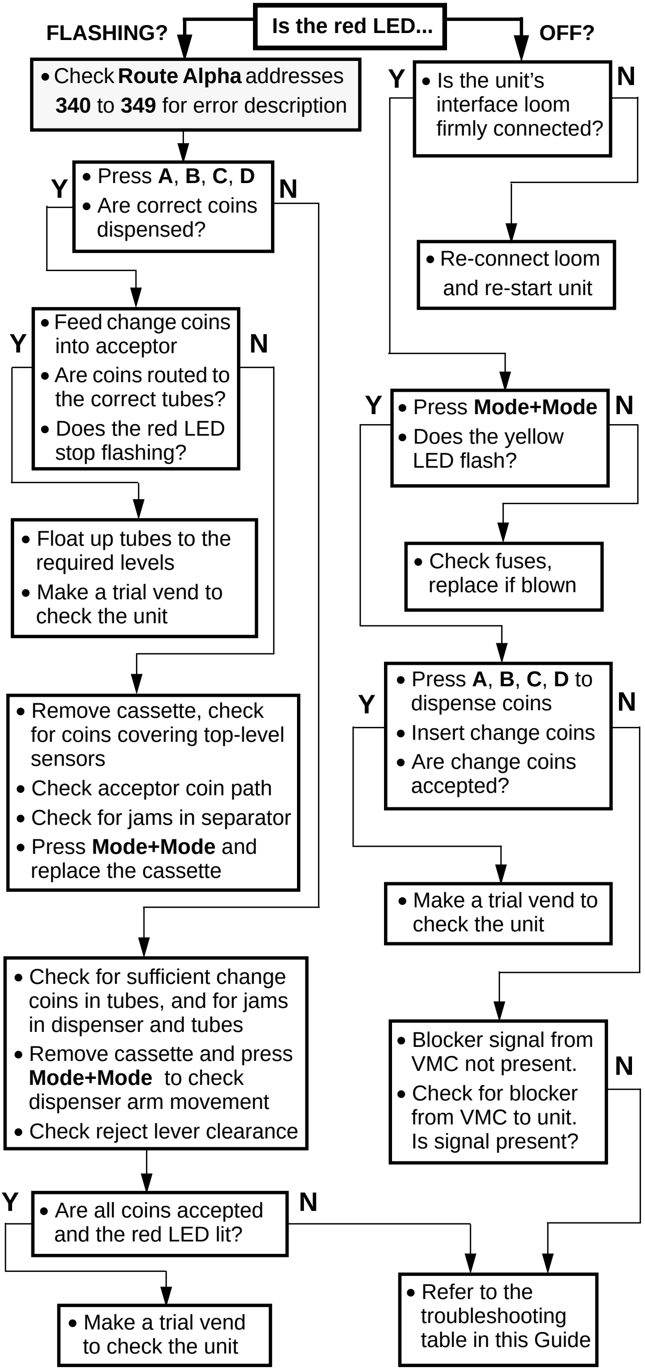
Replace the creditor, reconnect the ribbon cable and press the creditor into place.

Park the dispenser arms and replace the coin cassette.

Make sure that the release catches of the creditor and of the cassette snap shut firmly.

Switch on power to the machine. Check that the red LED comes on.

Troubleshooting the CashFlow® Unit



Troubleshooting the CashFlow® Unit

Problem	Causes	Actions
No coins accepted	Blocked accept gate opto’s, or build up of dirt in the unit	**Switch off power to machine**, check if the opto’s are blocked, and clean the unit. Refer to the ***Product Maintenance Handbook***’s cleaning section before cleaning the opto’s.
	Power loom not inserted correctly	**Switch off power to the machine**, and check the loom.
Poor coin acceptance	Changegiver unit is not level	Check and re-level the unit if necessary.
	Modules are not mounted and aligned correctly	Check that the coin entry and exit chutes of the machine are aligned with the coin entry cup on the unit and the cashbox on the machine.
		Adjust the modules until they are aligned accurately.
	Build-up of dirt in the acceptor	**Switch off power to machine**, check and clean acceptor.
Coins are accepted but no credit is given	Power loom is not inserted correctly	**Switch off power to the machine**, and check the loom.
	Coin jam in the separator module *(post gate strobes are covered)*	**Switch off power to the machine**, and check the separator for jams.
	Accept gate strobes mechanism blocked or dirty	Refer to the ***Product Maintenance Handbook*** before attempting to clean the strobes or the opto’s.

Problem	Causes	Actions
Unit rejects one type of coin or token	Coin or token is inhibited	Check the coin/token is in the coin set, and has been enabled. Use the **Route Alpha 250** terminal to enable the coin
	Coin or token is damaged or worn	Discard the worn or damaged coin/token.
	A tube has reached pre-set float level, further coins are rejected because the unit is in *float mode*	Press **A** to leave *float mode* and to clear any credit. Check the tube levels, then make a vend to check that the correct change is dispensed.
Coins are not routing correctly	The level of coins in a tube is covering a top-level sensor	Check tube counts. If they are above the pre-set float levels and **automatic tube inventory** is set, press **Mode+A+C** to float-down the coins in the tubes.
	The top-level sensor loom or the separator loom is not connected correctly	**Switch off the power**, remove the cassette and release the acceptor. Check that the top-level sensor and separator looms are fitted correctly. Replace the acceptor and cassette. Switch on power to the unit, insert coins and check routing.
	Wrong acceptor or separator is fitted	Check that the acceptor and separator are the correct versions. Refer to your authorised MEI distributor.
	A tube is disabled	Use the **Route Alpha 250** terminal to enable the tube.

Problem	Causes	Actions
High-value coins are rejected and exact change light is ON	Too few coins in the change tubes, leaving the low-level sensors uncovered Unit is in *No overpay* mode	Re-float the coin tubes through the acceptor until the low-level sensor mirrors are covered. Check **Route Alpha 250** address 242.
Incorrect change is dispensed	Insufficient change coins are available Incorrect coin values are set Incorrect prices are set for selections	If required, float up through acceptor with correct change coins. Check coin values and prices, reset if necessary using the **Route Alpha 250** terminal. Press **A, B**, **C** and **D** to check if change coins are dispensed. Check that coins are being routed to the tubes correctly.
No coins are dispensed	Levels of coins in the tubes are below the safe count Dispenser loom not connected, or loose Faulty dispenser module	Check that change coins are available in the tubes. If necessary, float up the tubes with the correct change coins. **Switch off power to the machine** and check that the dispenser loom is fitted correctly. Refer to the ***Product Maintenance Handbook.*** Check that the dispenser module is operating correctly. Refer to ***Maintenance Handbook's*** module replacement section before you attempt to service or to replace the dispenser.

Problem	Causes	Actions
Red LED is ON, except when a vend is made	Normal operation	No action
Red LED is ON but coins are not accepted	Coin jam in the changer mechanism	Check for jams in the acceptor and in the tubes. Clear the jams. Press **Mode+Mode** to park the dispenser arms before replacing the cassette, then dispense a coin from each tube to check operation.
	Lid of the acceptor is open	**Switch off the power to the machine**. Open and close the lid of the acceptor, **wait at least 15 seconds**, then switch on again.
	Not enough reject lever clearance	Check clearance is between 2 - 3mm, and adjust if necessary.
Red LED stays OFF	No power to the unit, or voltage not correct	Check that the power supply to the changegiver is at the voltage shown in the window on the keypad label. Test the power supply by pressing the **Mode** button.
	No power to the unit - loose loom or blown fuse	If the yellow LED flashes, the power is ON. If yellow LED stays off, **switch off power to the machine**, and check all power looms and fuses. Replace any blown fuses. Restart the machine and check that the red LED is on.

Problem	Causes	Actions
Red LED is OFF, but change coins are routed to the cashbox and not to the tubes	Mismatch between the true coin count in a tube and the count being registered by the changegiver	Press and hold down **A**, **B**, **C** and **D** for at least three seconds each to dispense coins down to the tube safe counts. Press **Mode + A + B,** and insert change coins through the creditor until tubes reach their pre-set levels. If an audit FEM is fitted, **Mode**+**A**+**B** is **not** available to reset tubes automatically to pre-set levels**. In this case, float tubes to required levels and make a trial vend.**
Red LED is *FLASHING*	Fault with the changegiver unit	Check **Route Alpha 250** addresses **340** - **349**. Press **A**, **B**, **C** & **D** to check if coins are dispensed. If the red LED is still flashing, **switch off the power to the machine**, wait at least 15 seconds and switch on again. Check that coins are dispensed.
	A coin has covered the top-level sensor mirrors	Remove the coin cassette and check the tops of the coin tubes.
	A coin is jammed in the dispenser module	**Switch off the power to the machine**, remove the cassette and check the dispenser for jams. Clear any blockages and check for damaged coins.
	Fault with the audit module	Check the **Route Alpha 250** audit addresses. Return the unit to your MEI distributor for repair if necessary.
	Coin cassette is unclipped	Press coin cassette into place **firmly**, ensure clips snap shut.

Problem	Causes	Actions
Red LED stays OFF and all coins are rejected	No stock available for vending	Restock machine if necessary.
	No blocker signal from the machine	.Check for a full waste bucket. Check if machine is paused halfway through a vend cycle. Complete the cycle if necessary.
	LED or keypad fault	Check the keypad module. If faulty, refer to your MEI distributor.
	Faulty transformer	Check the transformer. If faulty, refer to your MEI distributor.
Red LED *permanently* OFF. No other problems.	Faulty LED or keypad module	Check the keypad module. If it is faulty, refer to your authorised MEI distributor.
Red LED is *flashing* and no coins are accepted	Check **Route Alpha** addresses 340 to 349 for a description of the error	Use the table of **Route Alpha 250** error addresses in this manual
	The lid of the acceptor is not closed firmly	**Switch off power to the machine** and open and close the lid of the unit. Make sure the lid snaps shut firmly. **Wait at least 15 seconds** and switch the power on again.
	The acceptor loom is not connected	Check the acceptor loom and reconnect it if necessary.
	The coin path in the acceptor is dirty	**Switch off power to the machine** and clean the acceptor.
Yellow LED is OFF	Normal operation	No action

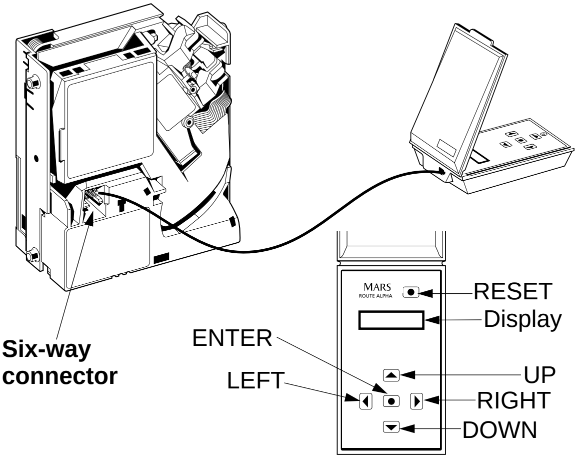
Problem	Causes	Actions
Yellow LED *flashes* when coins are accepted	Normal operation	No action
Yellow LED remains OFF when Mode button is pressed	No power supply to the vending machine	**Switch off power to the machine**, check all looms and check all fuses. Replace blown fuses, following the instructions in this manual.
Yellow LED is *flashing*	The changegiver is in *shifted mode* because the **Mode** button has been pressed	The keypad is available to change the functions of the unit. (*To exit from shifted mode, press* **Mode** *or wait for 45 seconds*)
Yellow LED is OFF *permanently.* No other problems.	Faulty LED or faulty keypad module	Check the keypad module. If faulty, refer to your MEI distributor.
Problems in handling coins persist after all solutions have been tried	Faulty unit, or faulty modules	Contact your MEI distributor. *To help diagnosis, note the symptoms, and the model and serial number of the unit for reference.* These numbers are on a label on the side of the unit.

Setting a Unit's Functions with a MEI® Route Alpha 250 Terminal

Each piece of data which determines the unit's functions is stored in a separate address. Use the terminal to read an address and to check or set the unit's functions.

Setting Functions

Insert the plug on the **Route Alpha 250** terminal into the six-way connector in the acceptor unit.



A half-size zero is displayed when the terminal powers up, followed by the software version number and then the first address number with a **dot**, or a **dot** and **dash** (**1.** or **1.-**)

Functions can be changed only if a dash shows after the address number.

Press UP or DOWN slowly to display addresses one after the other. Hold down a key to display addresses at an increasing speed. Press a key twice quickly to jump large blocks of addresses.

To set a function, press ENTER to show the current value in the selected address, then change the value by pressing UP or DOWN.

Press ENTER again to return to the address display. Press RESET to store the new value.

> **NOTE:** *If an error occurs, four half-size zeros appear. Press RESET to clear this display and to return to the current address.*

Troubleshooting the MEI® Route Alpha 250 Terminal

Symptom	Cause	Solution
Terminal displays an error message at power-up	Communications error	Press **RESET**
Terminal displays an error message when changing between address and data mode	Communications error between terminal and product, or the terminal does not recognise the product it has been connected to	Repeat the last operation.
Terminal powers up but addresses cannot be accessed	The product is not compatible with the terminal	Different terminal needed, or different software needed.
Terminal does not power up	Bad connections or faulty cable	Check connections. replace lead if necessary.
Terminal powers up but one of the keys does not work	Faulty key	Use the terminal's self-test option. If the key is faulty, send terminal for repair.
Non-standard characters printed on the display	Faulty unit	Send unit for repair.

Address Settings for Use with the MEI® Route Alpha 250 Terminal

Address	Parameter	Range	Meaning	Notes
200	Maximum credit	**0-65,535**	Maximum credit allowed	
201 - 204	Prices **1, 2, 3,** & **4**	**0-65,535**	Values of prices **1, 2, 3 & 4**	
226	Single vend or multi-vend	**0 - 1**	**0** = single vend **1** = multi-vend	
227	Escrow return inhibit	**0 - 1**	**0** = escrow return allowed **1** = escrow return inhibited	
228	Reset mode (**electromechanical installation only**)	**0 - 4**	**0** = blocker reset **1** = delayed blocker reset (20mS) **2** = delayed blocker reset (300mS) **3** = blocker hold reset **4** = reset after escrow accept signal	

Address	Parameter	Range	Meaning	Notes
229	Inhibit **coin**: coins 1 to 4	**0 - 15**	Address value = the sum of the codes where: Code **0** = no coins inhibited Code **1** = inhibit coin 1 Code **4** = inhibit coin 3 Code **2** = inhibit coin 2 Code **8** = inhibit coin 4 To inhibit more than one coin at the same time, add their **codes** together. For example, codes **1** + **8** = **9**. If you enter **9** as this address range value, coins 1 and 4 will be inhibited.	
230	Inhibit **coin**: coins 5 to 8	**0 - 15**	Address value = the sum of the codes where: Code **0** = no coins inhibited Code **1** / **2** / **4** / **8** = inhibit coin 5 / 6 / 7 / 8	
231	Inhibit **coin**: coins 9 to 12	**0 - 15**	Address value = the sum of the codes where: Code **0** = no coins inhibited Code **1** / **2** / **4** / **8** = inhibit coin 9 / 10 / 11 / 12	

Address	Parameter	Range	Meaning	Notes
232	Inhibit **exact change** group Inhibit coins 1 - 4	**0 - 15**	Code **1 / 2 / 4 / 8** = inhibit change coin 1 / 2 / 3 / 4	
233	Inhibit **exact change** group Inhibit coins 5 - 8	**0 - 15**	Code **1 / 2 / 3 / 4** = inhibit change coin 5 / 6 / 7 / 8	
234	Inhibit **exact change** group Inhibit coins 9 - 12	**0 - 15**	Code **1 / 2 / 4 / 8** = inhibit change coin 9 / 10 / 11 / 12	
235	Change delay	**0-255**	Delay in steps of 0.5 second	
238	Price hold	**0 - 1**	**0** = do not hold price **1** = hold price	
241	Decimal point position	**0 - 3**	**0 / 1 / 2 / 3** = move point position 1, 2, or 3 spaces	
242	Overpayment inhibit	**0 - 1**	**0** = overpayment allowed **1** = overpayment inhibited	
243	Clear overpayment inhibit	**0 - 1**	**0** = cleardown allowed **1** = cleardown inhibited	

Address	Parameter	Range	Meaning	Notes
244	Keypad inhibit	**0 - 1**	**0** = keypad enabled **1** = keypad disabled	
245	Price teach inhibit	**0 - 1**	**0** = price teach allowed **1** = price teach inhibited	
246	Fast sense (*electromechanical only*)	**0 - 1**	**0** = normal **1** = fast	
247	Float down (*automatic tube inventory*)	**0 - 1**	**0** = float down disabled **1** = float down enabled	
251	Float level for tube **A**	**0 - 255**	Set number of coins to be floated to in tube **A**	
252	Float level for tube **B**	**0 - 255**	Set number of coins to be floated to in tube **B**	
253	Float level for tube **C**	**0 - 255**	Set number of coins to be floated to in tube **C**	
310	Value of coins in tubes	**0 - 65,535**	Value of coins in ALL tubes - READ ONLY	
311	Coin count for tube **A**	**0 - 255**	Current number of coins in tube **A** - READ ONLY	

Address	Parameter	Range	Meaning	Notes
312	Coin count for tube **B**	**0 - 255**	Current number of coins in tube **B** - READ ONLY	
313	Coin count for tube **C**	**0 - 255**	Current number of coins in tube **C** - READ ONLY	
321 - 332	Value of coins 1 - 12	**0 - 65,535**		
340 READ ONLY	Full sensor errors on tubes **A, B,** or **C**	**0 - 255**	Range value = sum of the codes, where: **1** / **2** / **4** = tubes **A** / **B** / **C** **128** = post gate strobe error	
341 READ ONLY	Disabled tube at position **A, B,** or **C**	**0 - 31**	Range value = sum of the codes, where: **1** / **2** / **4** = tubes **A** / **B** / **C**	
342 READ ONLY	EEPROM errors - i	**0 - 15**	Range value = sum of the codes, where: **1** = page 0 EEPROM error **2** = page 1 EEPROM error **4** = corrupt audit FEM **8** = audit FEM removed	

Address	Parameter	Range	Meaning	Notes
343 READ ONLY	EEPROM errors - ii	**0 - 15**	Range value = sum of the codes, where: **1** = incorrect configuration version **2** = audit FEM not initialised **4** = undefined **8** = internal EEPROM write error	
344 READ ONLY	Operational errors - i	**0 - 15**	Range value = sum of the codes where: **1** = coin-set code error **2** = creditor initialisation error **4** = HI^2 hardware error **8** = HI^2 transmission error	
345	Operational errors - ii	**0 - 15**	Range value = sum of the codes, where: **1** = cassette removed **2** = protocol A transmit error **4** = protocol A receive error **8** = cashbox full	
346	BDV errors i	**0 - 15**	**1** = audit timed out **2** = VMC timed out **4** = CPC timed out	

Address	Parameter	Range	Meaning	Notes
347	BDV errors ii	**0 - 15**	Range value = sum of the codes where: **1** = audit incompatible **2** = VMC incompatible **4** = CPC incompatible	
349	Reset error flags	**0 - 1**	**0** = do not reset error flags **1** = reset error flags	
360	Audit module - VMC I/D ADVANCED AUDIT ONLY	**0 - 65,535**	Vending machine identification code	
361	Audit - print-out language ADVANCED AUDIT ONLY	**0 - 4**	**0** = **English. 1** = French **2** = German **3** = Dutch **4** =Spanish	
362	Audit - print-out type ADVANCED AUDIT ONLY	**0 - 2**	**0** = BASIC **1** = BASIC + INTERIM VEND REPORT **2** = BASIC + INTERIM + FREE VEND REPORT	
363	Audit - print-out lines limit ADVANCED AUDIT ONLY	**0 - 25**	Limits the details on the print-out to the first few specified price lines	

Address	Parameter	Range	Meaning	Notes
364	Audit - installation day ADVANCED AUDIT ONLY	**1 - 31**	**Day date** of installation into machine	
365	Audit - installation month ADVANCED AUDIT ONLY	**1 - 12**	**Month** of installation into machine	
366	Audit - installation year ADVANCED AUDIT ONLY	**0 - 99**	**Year** of installation into machine	
385	Audit unit is BDV	**0 - 1**	**0** = audit unit not BDV type **1** = audit unit BDV type	
386	VMC unit is BDV	**0 - 1**	**0** = VMC unit is not BDV **1** = VMC is BDV	

Installing, Starting and Testing a CashFlow® Unit

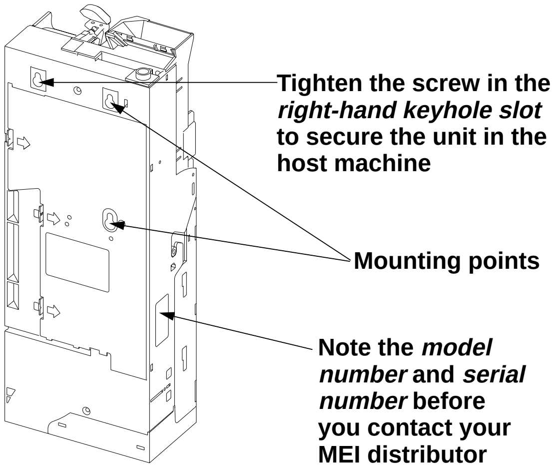
Before installation...

1. Check that the unit's specifications are correct for the host machine.

2. Ensure that the unit's modules are assembled securely.

3. Check that the connector on the unit's loom matches the one on the host machine.

4. Confirm that the voltage of the power supply ***to the changegiver*** is the same as that shown in the keypad window of the changegiver.

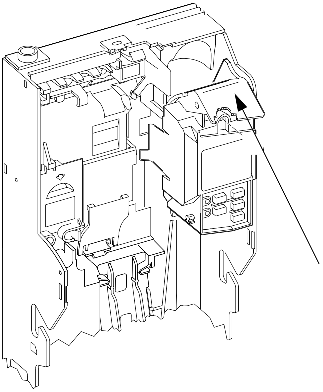


Fit the changegiver onto the locating screws in the machine

1. Ensure that the unit is level on its three keyhole mounting slots.

2. Check that the right-hand mounting screw is at the top of the keyhole slot, and that the unit is **level**.

3. Press down the top cover flap and tighten the right-hand mounting screw to secure the unit in place in the machine.



Push open the top cover flap to get access to the fixing screw and to tighten it

Connect the looms and secure them in their correct positions

1. Check that the looms cannot be trapped by the unit or by the door of the machine.

2. Check that the unit's lid opens fully when the reject button is pressed, and that the lever has 2mm - 3mm of clearance from the reject mechanism of the machine. Adjust the clearance if necessary.

3. **Ensure that the unit's coin entry cup is aligned with the machine's coin entry chute, and that the coin exit chutes are lined up.**

4. With the power off, insert ten of the largest and smallest coins to check the coin routing to the coin return cup.

Switch on the power to the unit

1. Check that the red LED comes on.

2. Set the vend prices with the keypad or with the **Route Alpha 250** terminal.

NOTE: Use the keypad if the installation has an electromechanical interface. If the installation has an electronic serial interface, prices are normally held in the vending machine.

Float the coin tubes

Floating the tubes through the creditor

1. Press **Mode + A**, and insert change coins. When the tubes reach the pre-set maximum float level, further coins are routed to the cashbox.

Use the coin entry slots to replace any coin that falls inadvertently through a tube, so that it is not counted twice by the creditor.

2. Press **A** to return to normal operation.

Floating the tubes by hand

NOTE: *Do not* attempt to float up the tubes by hand if the unit has an audit module fitted. Float the tubes through the creditor.

1. Insert a full coin cassette, or remove the unit's cassette and fill the tubes to the float levels.

If the cassette is difficult to remove, release it and tilt it forward. Push in the coin filling flap, and fill tube **A** through the gap. Fill tubes **B**, **C** and **D** through the coin entry slots.

2. Press **Mode + Mode**, replace the cassette, then press **Mode + A + B**.

3. Insert samples of non-change coins to check that they route to the cashbox.

4. Press **A**, **B**, **C** and **D** in turn to check that coins are dispensed.

5. Press **Mode + A** and refloat the tubes through the creditor.

When the pre-set float level is reached, further coins are routed to the cashbox.

6. Press **A** to return the unit to normal operation.

The unit is now ready for use

MEI Product Manuals

Full technical details of this product are included in the **CashFlow**® **530 changegiver** ***Product Maintenance Handbook***, a copy of which is available, with other handbooks related to the product, from your MEI Approved Distributor, or your regional **MEI** sales office.

MEI Product Training

Product training courses are available for **CashFlow**® and other MEI products.

The courses cover the technical features and the maintenance of the product, and give you hands-on experience in servicing **CashFlow**® products quickly and efficiently.

Contact your regional **MEI** Sales Office for more information.

REGIONAL OFFICES

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THE INTELLIGENT TRANSACTION™

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